

Amendments to the Specification

Please add the following paragraph between the title and the first line of text, page 1, line 4, as follows:

This is a Divisional Application of Application No. 09/630,444 filed August 2, 2000, which in turn is a Continuation-In-Part Application of Application No. 09/462,581 filed January 11, 2000, now abandoned, which in turn is a U.S. National Stage Application of PCT/JP99/02524 filed May 14, 1999. The entire disclosure of the prior applications is hereby incorporated by reference herein in its entirety.

Please replace the paragraph beginning on page 5, line 19, with the following rewritten paragraph:

Another invention that achieves the second object is a method for manufacturing a substrate for forming a patterned film by causing a specific fluid to adhere, comprising the steps of:

a) masking ~~[a base]~~a base with a mesh mask that covers the region other than a pattern formation region in which the patterned thin film is formed and also covers a non-affinity region not having an affinity to the fluid such that an affinity region having an affinity to the fluid is disposed according to specific rules within the non-affinity region in the pattern formation region,

b) plasma-working the base covered with the mesh mask, and

c) performing a modification treatment on the molecules dissociated by the plasma working.

Please replace the paragraph beginning on page 6, line 9, with the following rewritten paragraph:

Yet another invention that achieves the second object is a method for manufacturing a substrate for forming a patterned film by causing a specific fluid to adhere, comprising the steps of:

- a) masking ~~{a base}~~ a base with a mesh mask that covers the region other than a pattern formation region in which the patterned thin film is formed and also covers a non-affinity region not having an affinity to the fluid such that an affinity region having an affinity to the fluid is disposed according to specific rules within the non-affinity region in the pattern formation region, and
- b) performing a modification treatment on the mesh-masked base by irradiating it with ultraviolet rays.

Please replace Table 1, beginning on page 18, line 20, with the following rewritten

Table 1:

Table 1

| Constituent element | When the fluid contains polar molecules | When the fluid does not containing polar molecules |
|---|--|---|
| Pattern non-formation region 11 Non-affinity regions 111 | Bakelite <u>BAKELITE™</u> , polyester, polyethylene, Teflon <u>TEFLON™</u> , PMMA, polypropylene, vinyl chloride | Polyvinyl alcohol, polyacrylic acid, nylon, glass |
| Affinity regions 110 | sulfur compounds having OH groups, silane coupling agents having OH, COOH, NH ₂ , or other such groups | sulfur compounds having alkyl groups, organic compound films (such as paraffin) |

Please replace Table 2 beginning on page 27, line 1, with the following rewritten

Table 2:

Table 2

| Subject | Fluid Which Contains Polar Molecules | Fluid Which Does Not Contain Polar Molecules |
|------------------------------------|---|--|
| Composition of the Sulfur Compound | Sulfur compounds which have OH- groups or CO ₂ H groups. For example, HO ₂ C(CH ₂) _n SH and OH(CH ₂) _n SH | Linear chain alkane-thiols which can be represented by C _n H _{2n+2} SH and fluorine based compounds which can be represented by CF ₃ (CF ₂) _m (CH ₂) _n SH |
| Composition of the Substrate | Poly(vinyl alcohol), poly(acrylic acid), nylon, glass | Bakelite BAKELITE™, polyester, polyethylene, Teflon TEFLON™, PMMA, polypropylene, vinyl chloride |

Please replace the paragraph beginning on page 32, line 11, with the following rewritten paragraph:

Mask formation step (Figure 9A): The mask formation step is a step in which a mask 201 is applied over the base 100. A material with which unreacted groups will appear upon irradiation with a plasma, ~~[such as]~~ such as a specific plastic, glass substrates whose surface has been coated with TEFLON™~~Teflon~~, and the like can be used as the base 100. The mask 201 is formed in a pattern such that the mask will cover only those regions of the base 100 that are to be made hydrophobic. For instance, when a fluid containing polar molecules is used, the mask is provided so that the pattern non-formation region 11 and the non-affinity regions 111 in the pattern formation region 10 will be exposed. The mask can be formed from a variety of materials, such as exposure masks, emulsion masks, and hard masks. When an exposure mask is used, it is formed from chromium, chromium oxide, silicon, silicon oxide an oxidation film, or the like by vacuum vapor deposition, sputtering, CVD, or another such process.

Please replace the paragraph beginning on page 49, line 19, with the following
rewritten paragraph:

The mask 109 is formed in the base 100 in the mask formation process. A material on which unreacted groups are formed on plasma irradiation, such as a prescribed plastic or glass of which the surface has a TEFLON™ ~~teflon~~-finish, is used for the base 100. The mask 109 is formed on the base 100 in a pattern so that only the regions which are to be non-hydrophilic are masked. Various mask materials can be used to form an exposed mask, an emulsion mask or a hard mask for example. When an exposed mask is used, a chromium, chromium oxide, silicon, silicon oxide or oxide film, for example, can be formed using a vacuum vapor deposition method, by sputtering, or with a CVD method for example. Moreover, various patterns such as those indicated in Embodiment 1 can be used for the mask pattern.